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ABSTRACT

A study is designed to assess the relative effectiveness of two types of teacher supervision--that by a colleague-supervisor team and that by a single supervisor--both using videotape in a series of microteaching sequences. In each of four teach-reteach sequences, a specific teaching behavior is selected for emphasis in the supervisory conference. The first two sequences are reported here: orienting students to the learning task and reinforcing student responses. Subjects were interns in a master of arts in teaching program. Three teams of two interns and the supervisor comprised the experimental group; five interns, each working individually with the supervisor, the control group. The same five-step conference format was followed by both groups: orientation to the conference, provision of feedback, selection of a focus, provision of discrimination training, and provision of closure. Performance criteria were developed and used to code microteaching videotapes to obtain change scores between teach and reteach sessions. The hypothesis was tested using the Mann Whitney U statistical test. Colleague-supervised interns performed a significantly greater number of specific teaching behaviors in the first sequence. In the second they performed significantly better on three of eight verbal and three of ten nonverbal reinforcing behaviors. (The supervisory sequence is described, and performance criteria and teaching behaviors for pre-instructional set and for student reinforcement are appended.) [Not available in hardcopy due to marginal legibility of the original document.] (JS)

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A PRELIMINARY REPORT ON

THE EFFECTIVENESS OF COLLEAGUE SUPERVISION ON THE ACQUISITION OF SELECTED TEACHING BEHAVIORS IN A MICRO-TEACHING SERIES

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EFFECTIVENESS OF COLLEAGUE SUPERVISION ON THE ACQUISITION OF SELECTED TEACHING BEHAVIORS IN A MICRO-TEACHING SERIES

The purpose of this study is to assess the relative effectiveness of colleague supervision with a supervisor and a supervisor alone, both using videotape in a series of micro-teaching sequences. This is a preliminary report of a study which will continue throughout the year with plans for replication in subsequent years.

RATIONALE

Supervision has been characterized by a superior making an observation, evaluating the global teaching act, handing this evaluation to the teacher and asking if there are any questions. When the supervisor did review the teaching act with the teacher, he typically engaged in <u>telling</u> the teacher how he should teach. Such a strategy creates and maintains a teacher depending on external sources for help and evaluation. To obtain a professional identity each teacher must be able to <u>analyze</u> his own teaching performance and effect desired modifications.

Many educators are promoting colleague supervision as another important step toward achieving professional maturity. In practice it is nearly nonexistent with experienced teachers and only to a limited degree with novices. Proponents point out that when more than one person is involved in supervision, different opinions and experiences are brought to the teaching act being reviewed. As the novice becomes a part of a supervisory team, he becomes more aware of the adjustments in perception that are called for in new teachers, and he may increase his motivation to make adjustments in his own perceptions. When he sees that other new teachers share many of his problems and face other problems he has already solved or been immune to, he may learn to accept his successes and failures more realistically. By observing other teachers as a

member of a supervisory team, the novice develops skills in observation and analysis of teaching and can then assume more responsibility for the analysis and modification of his own teaching.

More specifically, the advantages claimed for interns are:

1. Interns see other beginners working on similar problems.
2. Interns draw varying ideas and viewpoints.
3. Interns may relate to another peer better than a person in the role of a supervisor.
4. Interns are able to relate to the administration policies of a particular school and discuss them with a common frame of reference.
5. Interns may find it advantageous to discuss particular students they both teach.
6. Interns can discuss various curriculum matters in both the micro-teaching and school contexts.
7. Interns can maintain a continuing, helping relationship with each other.

Although logically, colleague supervision appears to be desirable, little or no evidence is available in terms of its affect on a novice's acquisition of teaching skills or differences in attitudes. This is the intent of the present study.

DESCRIPTION

The effectiveness of the different supervisory formats is being studied in a micro-teaching context. In each of a series of teach-reteach sequences, a specific teaching behavior is selected for emphasis in the supervisory conference. The criterion measure is the difference in performance between the teach-reteach on each teaching behavior.

The present study includes four micro-teaching sequences emphasizing the following teaching behaviors:

1. Orienting students to the learning task
2. Reinforcing student responses
3. Asking higher order questions
4. Achieving closure

In addition, after the last sequence an assessment will be made of each group's attitudes and global teaching behavior.

This preliminary report is concerned with two micro-teaching sequences conducted to this date. In the first sequence, Orienting Students to the Learning Task was the selected teaching behavior and Reinforcing Student Responses was selected for the second sequence.

Subjects for the study were interns in the Master of Arts in Teaching Program at Johns Hopkins University. These students are in their academic year preceding summer teaching laboratory experiences and internship in the following semester.

The experimental group is comprised of three teams of two interns and the supervisor. The control group consists of five interns, each working individually with the supervisor.

SUPERVISORY STRATEGY

The conference format as outlined below is followed by both the experimental and control groups. The interns when participating in the team were involved as if they were co-supervisors; therefore, the reader should note that the term, supervisor, has two meanings in the following description. In

the case of the experimental group it means the team of supervisors; in the case of the control group, the supervisor worked alone.

1. Orienting Teachers to the Conference The first time the intern/teacher is videotaped, he views a portion of his teaching and responds to a question such as, "Did you think you looked like that on TV?" The supervisor reassures him that his "cosmetic" concerns are due to looking at himself for the first time in this context and that the television tends to intensify minor things.

During this part of the conference, the objective is to obtain the teacher's recognition of the need for a behavioral change. This is accomplished by the following:

(a) The supervisor(s) asks the teacher to state the learning objectives for the instructional period. By using probing questions such as, "Could you be more specific?" or "What, specifically, are the pupils able to do at the end of the period?" or "Can you put the objective into terms of pupil behavior?" the teacher is guided in his delineation of the specific objectives.

(b) The supervisor asks the teacher to reflect on his teaching. The teacher is then asked to recall those aspects of his teaching that went the way he had planned and subsequently if anything did not turn out the way he expected it would.

As the teacher reflects on his performance, he is asked to relate this to the learning objectives already stated as well as to consider how his instruction is affecting pupils.

2. Providing Feedback The supervisor provides objective feedback to the teacher. This feedback is in the form of a graphic summary of selected aspects of teacher-pupil behavior (specific teaching behavior).

3. Selecting a Focus

(a) The supervisor guides the teacher in diagnosing his teaching performance in terms of his learning objectives and in analyzing the different factors in decision making presented earlier in this paper.

(b) The supervisor guides the teacher in relating specific teaching behaviors under study to the achievement of his learning objectives. This is accomplished by asking the teacher to consider each factor in arriving at the strategy to be implemented in his next teaching encounter.

(c) The supervisor guides the teacher in determining specific teaching behaviors he needs to acquire and/or refine to implement the prescribed strategy.

4. Providing Discrimination Training During this part of the conference, the supervisor teaches the teacher the specified teaching behavior and where to incorporate it in his instruction. The training is provided in the following way:

(a) The supervisor views a videotape of the teacher's performance with him. As the tape progresses, the supervisor reinforces the teacher each time he uses the selected behavior or its approximation. The supervisor either talks over the tape or stops it for increased emphasis. He also replays certain sections repeatedly. Specifically, the supervisor might say, "Note how many pupils responded to your question this time." "Note how much more analytical that response was."

(b) The supervisor selects several instances when the teacher used the specified teacher behavior and asks him to compare and contrast the result of his behavior in each instance. The teacher is also asked to compare and contrast his responses (behavior) to various cues of the pupils.

(c) The supervisor prompts the teacher by pointing out, as the tape progresses, where he can incorporate the specified behavior into his instruction. One technique used is to stop the tape and ask the teacher, "What would you do at this point?" or "How would you respond in this situation?"

5. Providing a Model of the Teaching Behavior After the teacher views his own performance, the supervisor shows him a "model" of the specific teaching behavior and points out how the behavior is being used. (This is not applicable to all behaviors; it was not used in the two sequences reported here.)

6. Providing Closure The supervisor concludes the conference by obtaining the teacher's commitment to practice the new behavior.

(a) The supervisor summarizes the points made by the teacher during the conference.

(b) The supervisor summarizes and reinforces instances in the initial teaching when the teacher used the selected teacher behavior.

(c) The supervisor constructs a simulated situation and asks the teacher to respond to it.

(d) The supervisor asks the teacher to delineate how he will incorporate the new behavior into his next teaching encounter.

COLLECTION AND ANALYSIS OF DATA

The data was collected for this report by videotaping the first two micro-teaching sequences of each intern. These recordings were coded using the Teacher Performance Criteria (See Appendix A). Change scores were obtained by comparing the teach and reteach sessions using the performance criteria cited above.

In this preliminary report, interrater reliability was determined by using the procedure described by Scott (1955). Coefficients of .80 and above were obtained.

TEST OF HYPOTHESIS

This report includes the test of the following hypothesis:

1. An intern experiencing colleague supervision will acquire and perform a significantly greater number of specific teaching behaviors in a micro-teaching sequence than when working with a supervisor alone.

In this preliminary report, the hypothesis was subjected to the Mann Whitney U statistical test.

TABLE I
Comparison of Change Scores

Specific Teaching Behavior: ORIENTING STUDENTS TO THE LEARNING TASK

Variables	Experimental Group Mean	Control Group Mean	U	Significance Level
Total Specific Behaviors	1.0	.5	.041	Significant @ .05 level

The hypothesis is supported in the first micro-teaching sequence. Interns in the colleague supervision group did acquire and perform a significantly greater number of behaviors which orient students to the learning task.

Although no attempt was made to show differences in terms of specific behaviors related to the orientation, in general the greatest changes do seem to occur in having interns relate to the lives and interests of students, presenting problems, delineating expectations, and stating objectives of the lesson.

Although the data are not conclusive, it could be inferred that these results indicate that the colleague group assists the teacher/intern in developing problems and finding ways of relating instruction to pupils. In essence, what seems to be taking place is the colleagues brainstorm together.

TABLE II
Comparison of Change Scores

Specific Teaching Behavior: REINFORCING STUDENT RESPONSES

Variables Verbal Behaviors	Experimental Group Mean	Control Group Mean	U	Significance Level
Complimenting...*	3.5	-1.3	.238	N.S.
Encouraging...	0	0	.238	N.S.
Eliciting...	-	-	-	-
Repeating...	3.0	.33	.005	Significant @ .01 Level
Elaborating...	-.5	.33	.545	N.S.
Identifying...	0	-.33	.005	Significant @ .01 Level
Asking...	-	-	-	-
Using...	0	.66	.057	Significant @ .10 Level

*See Appendix A for completion of Specific Behavior Description

Variables NonVerbal Behaviors	Experimental Group Mean	Control Group Mean	U	Significance Level
Smiling... *	0	-.33	.005	Significant @ .01 Level
Patting...	0	-.33	.005	Significant @ .01 Level
Nodding...	+.5	+1.33	.545	N.S.
Writing...	+1.0	+1.0	.238	N.S.
Gesturing...	-.5	+ .66	.057	Significant @ .10 Level
Standing...	-	-	-	-
Maintaining...	-.5	+1.33	.545	N.S.
Exhibiting...	-	-	--	-
Displaying...	-	-	-	-
Encouraging...	-	-	-	-

*See Appendix A for completion of Specific Behavior Description

Table II, Verbal Behaviors, indicates that the hypothesis is not supported for all specific behaviors. The data do show that the experimental group did use a significantly greater number of repeating student response, identifying favorably student response with student name, and using student contribution later in lesson. It should also be noted that the mean for the experimental group, complimenting student with one word or phrase, was larger although it did not reach significance level.

In terms of nonverbal behaviors, the experimental group reached significant levels for the following: smiling toward student, patting student on shoulder or head, and gesturing approval. Although the hypothesis is not supported for all behaviors, the data indicate that the colleague supervision group is more effective for selected behaviors.

The completion of this study should provide further data on which more conclusive statements can be made relative to the effectiveness of colleague supervision.

APPENDIX A.

PERFORMANCE CRITERIA FOR PRE-INSTRUCTIONAL SET:

1. Relate objectives of the course to lives and interests of students.
2. Relate day's work to objective of course.
3. Relate topics to current controversial issues.
4. Ask students to take stands on controversial issues.
5. Present discrepant events and situations.
6. Present a common stimulus.
7. Present a problem.
8. Delineate the expected roles of pupils in the lesson.
9. Relate lesson to prior instruction.
10. Relate lesson to realm of students' experiences.
11. Use instructional materials.
12. Arouse dissonance.
13. Use analogies.
14. State objectives of lesson.
15. Present agenda.
16. Give them a contrived frame of reference.

As a teacher, you will want to find those introductory remarks (or procedures) which will make the subsequent learning tasks more meaningful for the students.

Teaching Behaviors:

1. Areas where the teacher should consider the use of set induction are:

   at the start of a unit...before a discussion...before question-answer recitation...giving a homework assignment...before hearing a panel discussion...before student reports...when assigning student reports... before a film or filmstrip...before a discussion of a film or filmstrip, etc.

2. The teacher's method of introducing the lesson should be interesting and it should help the student want to become involved in the main part of the lesson.

3. The teacher should make the relationship or connection between the introduction and the body of the lesson clear.

4. The teacher should give the student some guides or cues in the introduction.

5. The teacher's introduction should help the students remember the material presented in the body of the lesson.

Examples of Research on Instructional Set:

The concept of pre-instructional procedure or set comes from research on learning and the theory which has directed and developed from that research. This research appears to indicate that the activities which precede a learning task have an influence upon the outcome of that task, and that some instructional sets promote learning better than others. If some instructional sets are superior to others, then each teacher is faced with the need to find those types of sets which will be most useful for his purposes and to modify these sets to fit the specific classroom situation.

In our own experience we have many examples of prior instructions influencing our responses in a new situation. If we have been told that a newly met person is a brilliant scientist, a slob, a straight arrow, or a contrite convict, we will notice and respond to different words and signals during the conversation and what we "learn" during the conversation will depend, partly, upon our prior instruction. Similarly, if we are told that tomorrow's test is hard or easy, essay or objective, we will study differently according to the instructions.

Let us suppose that you wish the class to read Chapter 3 in their textbook as homework and Chapter 3 is about Andrew Jackson and the changes which took place under the reign of "Andrew J." The problem which faces you is, what remarks or activities will produce the greatest learning for the next day. You could say, I suppose, "Now class, for tomorrow I want all of you to read Chapter 3 in the text." Such a weak set would probably produce the usual response, and the next day you'll discover that half of the class has not read the assignment and the remainder claim that they studied but are unable to answer your discussion questions.

To improve your set, you might try: "For tomorrow, I want you to read Chapter 3 in the text and come to class prepared for a discussion." This last sentence is an improvement because it gives the student more information about his goal, that of preparation for a discussion. But despite the obviousness of the addition, the student may need a good deal more help before he is able to prepare himself for the next day's discussion. What will you discuss? What points should he consider as he reads? What should he focus on while he reads? How should he use his past information? Should he learn facts or principles? Should he compare, contrast, both or neither?

A sufficient set, then, is one which gives the student adequate preparation so that while he goes through the activity he is able to come as close to the goals as you wish.

APPENDIX A.

Teacher Behaviors

Verbal behaviors demonstrated by teacher to indicate approval of student response:

Complimenting student with one word or phrase such as: good, fine, right, etc.

Encouraging student comment by use of word or phrase such as: Yes, go on, etc.

Elicit from fellow students reinforcement for student providing response

Repeating student response with tone of approval

Elaborating on student response without contradicting response

Identifying favorably student response with student name

Asking student to demonstrate his response for approval

Using student contribution later in lesson

Non-verbal behaviors demonstrated by teacher to indicate approval of student response:

Smiling toward student

Patting student on shoulder or head

Nodding approval

Writing student response on the chalkboard

Gesturing approval

Standing near student--approach student following response

Maintaining eye contact with student (attends to student)

Exhibiting interested facial expression

Displaying student work for class

Encouraging gesture